

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-38. (canceled)

39. (previously presented) A control system comprising:

an input module structured to respond to a condition by transmitting a representative signal; and

an output module operably coupled to the input module, the output module including firmware configurable with a first reflex function at a first time and a second reflex function at a second time, the first reflex function being structured to produce a state signal in response to receiving the representative signal from the input module and without requiring an enablement signal from a controller.

40. (previously presented) A control system as defined in claim 39, wherein:

the first reflex function comprises at least one of a Boolean logic function, a comparison function, a counter function, a timer function, and an edge detection function; and

the second reflex function comprises at least one of the Boolean logic function, the comparison function, the counter function, the timer function, and the edge detection function, wherein the first reflex function is different than the second reflex function.

41. (previously presented) A control system as defined in claim 39, further comprising a computer based tool to configure the firmware with one of the first reflex function and the second reflex function.

42. (previously presented) A control system as defined in claim 39, wherein the output module is coupled to the input module by a bus.

43. (previously presented) A control system as defined in claim 42, wherein the bus utilizes a CANopen protocol.

44. (previously presented) A control system as defined in claim 39, wherein the output module is coupled to the input module by a network.

45. (previously presented) A control system as defined in claim 44, wherein the network utilizes a CANopen protocol.

46. (previously presented) A control system as defined in claim 39, further comprising a master scanner operatively coupled to the input module and the output module.

47. (previously presented) A control system as defined in claim 46, wherein the master scanner comprises a programmable logic controller.

48. (previously presented) A control system as defined in claim 46 wherein the master scanner comprises a field bus coupler.

49. (previously presented) A control system as defined in claim 39, wherein the first reflex function is specified in an object dictionary.

50. (previously presented) A control system as defined in claim 49, wherein the object dictionary is embedded within a master scanner.

51. (previously presented) A control system as defined in claim 39, wherein a first network address is assigned to the input module and a second network address is assigned to the output module.

52. (currently amended) A control system comprising:
an input module structured to respond to a condition by transmitting a representative

signal; and

an output module operably coupled to the input module, the output module including a first reflex function and a second reflex function structured to produce a state signal in response to receiving the representative signal from the input module, the output module being structured to execute the second reflex function without requiring an enablement signal from a controller.

53. (previously presented) A control system as defined in claim 52, further comprising the controller operably coupled to the input module and the output module.

54. (previously presented) A control system as defined in claim 53, further comprising a configuration tool operably coupled to the output module, the configuration tool being structured to configure the reflex function.

55. (previously presented) A control system as defined in claim 54, wherein the configuration tool is structured to configure the reflex function by programming firmware associated with the output module.

56. (previously presented) A control system as defined in claim 52, wherein the reflex function comprises at least one of a Boolean logic function, a comparison function, a counter function, a timer function, and an edge detection function.

57. (previously presented) A control system as defined in claim 52, wherein the output module is coupled to the input module by a network.

58. (previously presented) A control system as defined in claim 57, wherein the network utilizes a CANopen protocol.

59. (previously presented) A control system as defined in claim 52, wherein the first reflex function is specified in an object dictionary.

60. (previously presented) A control system as defined in claim 59, wherein the object dictionary is embedded within a master scanner.

61. (previously presented) A control system as defined in claim 52, wherein a first network address is assigned to the input module and a second network address is assigned to the output module.